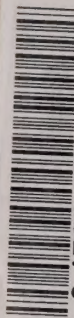


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Energy Efficiency Programs for Ontario



Ontario

Ministry
of
Energy

Vincent G. Kerrio
Minister



Ontario

Ministry
of
Energy

Vincent G. Kerrio
Minister

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INTRODUCTION

Government
Publications

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Making something more energy-efficient means that we get more for each unit of energy we use. In the 1980s energy efficiency became one of the main elements of energy management. For exam-

ple, in 1985 the average new car was 300 kilograms (660 pounds) lighter than the average new car in 1978. Its engine was 35 per cent smaller, and it got 25 per cent more miles to the gallon.

The concept of energy efficiency can be applied wherever energy is used. In buildings, a more efficient use of energy saves fuel while keeping the building as comfortable as before. In industry, greater energy efficiency allows less energy to be used to manufacture the same number of products.

In the past 15 years, Ontario has not only become significantly less dependent on oil, but it has also been using energy more efficiently. Nevertheless, Ontario and Canada still lag behind many other industrial nations in energy efficiency.

If Ontario is to remain competitive in international markets and have enough energy for the future, we must all make a commitment to energy conservation and greater energy efficiency.

But there are also more immediate economic benefits: Energy efficiency reduces the cost of the energy component in manufactured products, lowers energy costs for government and business, and diminishes the need for expensive capital investments in pipelines and power plants. Equally important, it lowers consumers' energy bills, enabling them to spend more of their income on other things.

There is still much to be done before Ontario is as energy-efficient as other advanced industrial nations. Although there are new technologies available that save energy and money, they are not being widely used in this province. Many old buildings, equipment, and processes have not yet been upgraded to improve their energy efficiency.

There are several reasons for Ontario's lag in energy-efficiency improvements. They include a lack of information on what can be done, and a shortage of

technical expertise and training in energy-efficient technologies. There are institutional barriers as well, including outdated codes and standards. And money can be a barrier: In some cases, capital is not available for investment in energy improvements; and some energy-efficient technologies never reach the market in Ontario because of the high risks of developing them for a relatively small market.

The Ministry of Energy's programs are intended to tackle these barriers to energy efficiency by providing information, training, workshops, and seminars, and financial assistance for retrofits, technology development, and market entry. The Ministry also has several programs that help in developing and commercializing alternative-energy technologies.

These programs are described in the following fact sheets:

PROGRAM FACT SHEETS

1. Energy Efficiency Programs for Industry
2. Agricultural Energy Services Program
3. Consumer/Residential Energy Advisory Program
4. Government and Institutional Energy Program
5. Municipal Energy Management Program
6. Commercial Buildings Energy Management Program
7. Energy Education Program
8. Energy Technology Development Program
9. Alternative Fuels Demonstration Program
10. Northern Ontario Wood Energy Program
11. Energy from Waste Program
12. Small Hydro Encouragement Program
13. Publications and Films

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1 ENERGY EFFICIENCY PROGRAMS FOR INDUSTRY

Government
Publications

Industries in Ontario will spend over \$3-billion on fuel and electricity in 1987. This is 47 per cent of the total industrial bill for fuel and electricity for all of Canada. Studies have shown that efficiency could be raised by up to 20 per cent, resulting in annual savings of \$600-million.

Canada is lagging behind other industrialized countries, such as Japan and the United States, in energy efficiency. Ontario exports more than 75 per cent of its industrial output, and since three of every 10 jobs in the province are provided by industry, greater energy efficiency is an important factor in maintaining employment. The Ministry of Energy acts as a catalyst to help Ontario industries become more energy-efficient, and thus more competitive around the world.

SUMMARY OF PROGRAMS

The Ministry of Energy's programs for industry are designed to overcome the barriers to greater energy efficiency. These obstacles are a lack of information in industry about the improvements that are possible, and a lack of expertise needed to capitalize on the opportunities.

Through on-site energy surveys, funding assistance for follow-up engineering work, showcase demonstrations of energy-efficiency improvements, and the provision of reliable, objective information about energy, the programs will encourage better use of energy by Ontario industries.

Beginning in early 1987, \$5-million will be spent over three years on programs intended to make Ontario industries more competitive, by helping them manage their energy better, in order to reduce production costs. Details of these programs follow.

PROGRAM DESCRIPTION

1. Industrial Energy Services Program

- On-site comprehensive energy audit by private consultants to determine the energy efficiencies of main processes and sub-systems, perfor-

mance of major equipment, and the potential for replacement with new systems. These free audits are available to industries with total annual energy costs of more than \$50,000.

The audits include a customized report to the client with a precise description of energy use, evaluation of improvements to processes and equipment, estimates of cost and payback period, and advice on how to proceed.

- Regional workshops are available to small industrial firms not qualifying for free surveys.
- An Energy Support Fund will provide grants following an energy audit, for both feasibility studies and project engineering.
- Feasibility Study Grants: These grants will pay 75 per cent of the costs of developing detailed budget information for the energy-efficiency measures recommended by the audit.

The precise definition of industrial energy use is the necessary first step toward improved energy efficiency.



- Project Engineering Grants: These grants will pay 25 per cent of the cost of the finished drawings and specifications that are necessary for the installation of energy-efficient equipment.

2. Market Entry Assistance Programs

a. Energy Monitoring

Demonstrations

- This program for monitoring process energy is conducted jointly by the Ministry of Energy and Ontario Hydro.
- The program is designed to make industry more aware of the increase in energy efficiency that can result from installing computerized systems that accurately measure, monitor, and record energy use throughout the plant.
- Several demonstrations of energy monitoring are planned for 1987. Funding assistance will be 50 per cent of the total eligible installed costs to a maximum of \$250,000 for each demonstration.

b. Process Equipment

Demonstrations

- This program provides market-entry assistance to manufacturers or suppliers to hasten the acceptance of commercially available technologies in energy-intensive industries.
- The Ministry will share with the manufacturer or distributor the cost of high-profile demonstrations of a variety of proven energy-efficiency technologies in their first industrial application in Ontario.
- Assistance is available for equipment and installation; performance monitoring; and marketing activities such as plant tours, seminars, and trade show exhibits.
- Applicants must be technology suppliers or users that demonstrate a strong interest and ability in marketing the technology.

3. Ministry Services and Advice

- The Ministry also provides energy technology information to Ontario's

industries.

- The Ministry co-sponsors technology workshops, conferences, exhibits, videotapes, and user manuals that provide industry with detailed information about energy technologies and services that are on the market.
- Ministry staff help suppliers of technology to develop and commercialize energy technologies by putting the suppliers in touch with the appropriate government or private sector agency.

FURTHER INFORMATION

- Industry Energy Services Program: (416) 965-9297
- Energy Monitoring Program: (416) 965-9297
- Process Equipment Demonstrations: (416) 965-8059

Long distance callers use toll-free Zenith 80420 or write to:

Industry Programs
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

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Education will have a decisive influence on Ontario's future energy security. Today's young people must be taught about energy issues if they are to become responsible users of energy. The Ministry of

Energy has developed an approach to energy education for young people that explains why conservation of non-renewable resources is important in their daily lives.

PROGRAM SUMMARY

Over the past eight years, the Ministry has developed a comprehensive program that provides Ontario schools with classroom materials and teaching aids on energy, and holds conferences and workshops to inform teachers about energy issues and methods of teaching students about energy. The message of wise energy use also reaches young children and their families through special events, dramas, and films.

PROGRAM DESCRIPTION

- A puppet show, *The Conserving Kingdom*, in French and English, can be viewed by children and their families in many shopping centres and at home shows across Ontario. It will also be featured during the 1987 summer season at Ontario Place.
- A filmed version of *The Conserving Kingdom* in French and English, can be booked for elementary schools for the 1987-88 school year. The French version of the play will tour elementary schools.
- A teacher's guide for *The Conserving Kingdom* accompanies both play and film for school viewing. A colourful activity book, based on the play, is distributed at public events. Both the guide and the activity book are available in French and English.
- *Energy in Society II*, a teacher's resource guide, was distributed to all high schools in the fall of 1986. It contains information and ideas for teaching energy in geography and science in grades 7 to 13. Copies are available upon request.

- "Strategem", a computer-based energy-management simulation exercise for senior high school use, is being pilot-tested by teachers in the Ottawa area. Plans are being made for general distribution to high schools in the fall of 1987.
- Professional development for teachers continues to be emphasized. An Energy Education Conference will be held in Toronto in February 1988.
- Energy Educators of Ontario, an organization of more than 800 science teachers, receives funding that enables teachers to exchange ideas on energy topics by means of a news magazine, workshops, seminars, and an annual conference.

FURTHER INFORMATION

Energy Education Program
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-0958
Long distance callers use toll-free
Zenith 80420

Dudley the Dragon, the lovable, sneaker-clad star of *The Conserving Kingdom*, and Duncan M. Allan, Deputy Minister of Energy.





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6 COMMERCIAL BUILDINGS ENERGY MANAGEMENT PROGRAM

Government
Publication

Commercial buildings – such as offices, stores, warehouses, and hotels – account for about 15 per cent of Ontario's energy consumption, or about \$2-billion annually. The potential for energy and cost savings in these buildings is tremendous.

New commercial buildings use about one-quarter as much energy as buildings constructed just 10 years ago, so there is considerable potential for savings in all but the newest buildings. Low-cost or no-cost operational improvements can often lead to savings of up to 30 per cent a year.

Since 1978, the Ministry of Energy has been working with building owners and managers through the Downtown Energy Forum, a voluntary program that promotes energy management in large commercial buildings in downtown Toronto. A similar forum has been run in Ottawa since 1983. During 1984-85, some 57 firms responsible for 3.6 million square metres of office space (38.8 million square feet) in 121 buildings in Ottawa and Toronto reported savings of up to \$10-million a year.

Because of the success of the Downtown Energy Forum, a similar program – the Cities Energy Forum – has been developed and is now available to medium-sized municipalities. Early in 1987 four highly successful pilot workshops were held in Oshawa, Niagara Falls, London, and Sudbury.

PROGRAM SUMMARY

The purpose of the Cities Energy Forum is to encourage the owners and managers of commercial and municipally owned buildings in Ontario to become involved in effective energy management. The program does this by providing workshops, annual forums, technical advice, and information.

By 1990 the Cities Energy Forum will be available in 18 medium-sized municipalities across Ontario. Its theme is "Invest in Energy Management and Save."

To be successful, the two Energy Forums, Downtown and Cities, must have a voluntary commitment at the ex-

ecutive level from each participating organization.

PROGRAM DESCRIPTION

- Initial one-day seminars introduce the program to interested municipalities. They offer an overview of the possibilities for saving energy and money in commercial and municipal buildings.
- Training Workshops: These are follow-up seminars that provide technical information and advice for building owners, managers, and operators of the participating organizations. They deal in detail with the specific matters of concern identified by the participants themselves.
- Annual Forums will enable all the participating organizations to exchange ideas and describe their successes of the previous year.
- The energy-conservation efforts of all the participants are supported by train-

Large downtown commercial buildings can realize dramatic savings by turning off lights during non-operating hours.



ing material, technical reports, and case studies.

- A subsidy of \$15,000 a year for three years is available to each participating community for the hiring of local technical energy advisors.

FURTHER INFORMATION

Commercial Building Energy
Management Program
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-5599
Long distance callers use toll-free
Zenith 80420

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5 MUNICIPAL ENERGY MANAGEMENT PROGRAM

Government of
Ontario Publications



Municipal governments in Ontario spend as much as 15 per cent of their annual budgets on energy. If energy costs are cut, operating costs can be lowered without reducing services. This means that a sound energy-management program is of value to every municipality. For example, since 1981, over 300 municipalities have used the Municipal Oil Conversion and Energy Conservation Program to establish more than 1,200 projects, which have saved over \$4-million a year in operating costs.

In 1978 the Ministry and the Association of Municipalities of Ontario (AMO) set up the joint Municipal Energy Conservation Program to encourage all Ontario municipalities to begin managing their energy by appointing energy co-ordinators. Two additional programs gave financial assistance to municipalities for hiring energy auditors to help municipalities set up energy-management programs, and for fuel conversion and other types of energy conservation.

PROGRAM SUMMARY

The current program gives information, technical training, and advice to municipalities, as well as financial assistance for energy audits and conservation projects. Through these mechanisms and through liaison with the Association of Municipalities of Ontario and other government ministries, the program encourages energy efficiency and wise energy management in order to reduce the demand for energy.

PROGRAM DESCRIPTION

- The Municipal Oil Conversion and Energy Conservation Program gives advice and financial and technical assistance for energy conservation. Assistance includes funding for energy

audits and engineering advice; evaluations of maintenance and operating procedures affecting energy consumption; and analyses of life-cycle costs for planned buildings.

- The AMO/Ministry of Energy Joint Program publishes the newsletter, *Network*, offers seminars, and gives direct technical assistance to small municipalities.
- Information is made available through studies, manuals, and technical reports.
- Training programs are given for operators of heritage and recreation buildings in conjunction with the Ministries of Citizenship and Culture, and Tourism and Recreation.

FURTHER INFORMATION

Municipal Energy Management
Program

Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-5599
Long distance callers use toll-free
Zenith 80420

The Grey County Courthouse and Administration Building, built in 1959 when energy was cheap, provided an opportunity to test out a variety of low-cost, no-cost retrofit measures which resulted in annual energy cost savings of \$5,000.



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4 GOVERNMENT AND INSTITUTIONAL ENERGY PROGRAM

GOVERNMENT
Publications



Government off-oil and energy conservation programs for provincially-owned buildings began in 1975. The 9,000 buildings covered included office complexes, law courts, laboratories, police stations, and garages. These highly successful programs were extended in 1981, and similar programs were introduced for non-profit institutions such as hospitals, schools, colleges, universities, homes for children and the aged, and museums. The programs provided technical advice, operator training, and financial assistance for off-oil and energy-conservation projects and for demonstrations of promising new technologies. By the end of 1985, the results of the \$37-million invested included the following achievements:

- Seventy-five per cent of government-owned building space had seen a 32 per cent reduction in energy use.
- Since 1976, schools and universities had reduced their annual oil consumption by 152 million litres.
- Colleges alone had cut their energy use by 31 per cent.
- In total, energy costs had been reduced by more than \$75-million a year. The cumulative savings exceeded \$450-million.

PROGRAM SUMMARY

As it is estimated that attractive energy-efficiency improvements costing more than \$500-million remain to be made, the Ministry of Energy introduced a new, five-year energy-efficiency program for the same sectors early in 1987.

The new program will provide energy-awareness seminars, technical advice, operator training, financial assistance for off-oil and energy-conservation projects, and financial assistance for demonstrations of promising new technologies.

These activities encourage government ministries and institutions to reduce energy demand by making energy-efficient improvements and managing their energy more carefully.

PROGRAM DESCRIPTION

- 1. Information:** The government and institutional program provides seminars, reference manuals, videos, case studies, and newsletters for senior management and building operators and managers.
- 2. Financing:** The program provides financial assistance for energy audits and smaller, short-payback projects, and information and advice on energy-service contracting.
- 3. Technology Demonstrations:** The Ministry shares with representative energy users the cost of selective demonstrations of new technology.
- 4. Training:** The Ministry provides comprehensive, ongoing training workshops for building operators and managers.

This program is being introduced through regional centres under the theme "Banking on Energy Efficiency".

ELIGIBLE CLIENT GROUPS

- Ministries occupying government-owned facilities
- Public hospitals
- Public and separate school boards of education
- Colleges and universities
- Homes for children and the aged, day care centres, halfway houses

McMaster University Medical Centre implemented an energy management program which avoided energy costs of \$18-million over a 10-year period while costing only \$2-million. Annual savings are presently \$2.7-million per year.



FURTHER INFORMATION

Government and Institutional
Energy Program
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-4618
Long distance callers use toll-free
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3 CONSUMER/RESIDENTIAL ENERGY ADVISORY PROGRAM

Government
Publications



Residential energy use accounts for about 20 per cent of all the energy used in Ontario each year. Since 1979 the Ministry of Energy has been working to improve the energy efficiency of both existing

and new housing stock throughout the province.

The Ministry's HeatSave program offers a comprehensive energy advisory service to homeowners at clinics held in various communities. In the program's first six years, more than 175,000 homeowners in 55 Ontario communities have benefited from the practical, personal advice given at HeatSave clinics. The Ministry has also worked closely with the building industry in featuring and promoting R-2000 energy-efficiency standards for new houses.

The Ministry will continue to stress information and training programs in the new and retrofit residential markets. Future programs will also address the residents and owners of multi-unit dwellings and small businesses operating from residential-like premises. The Ministry will be working with other government agencies on codes, standards, and building practices that promote energy efficiency in new housing. The Ministry will be developing information programs that will support higher energy efficiency for major household appliances. The goal is to lower Ontario's energy bill and promote more effective energy use across a broad spectrum of energy users.

PROGRAM SUMMARY

Through local clinics, seminars, technical publications, telephone advice, and other forums, the program provides advice on saving energy to consumers, homeowners, tenants, and small business entrepreneurs, and offers information to other groups, such as builders, that can influence consumers' purchases of products that use energy. The three-year, \$5-million program is intended to encourage energy conservation and efficiency among consumers, homeowners, and owners of small businesses in Ontario.

PROGRAM DESCRIPTION

1. Residential Advisory Services

- This service is for homeowners, apartment dwellers, and condominium operators; it offers up-to-date information and advice on practical ways of saving energy in houses, apartments, and condominiums, while at the same time making them more comfortable.
- HeatSave clinics will be held in selected Ontario communities.
- A series of advisory services for homeowners and residents of older homes in Metro Toronto began in October 1986, and will last for three years.
- The Ministry distributes technical information and advice at home shows across Ontario.
- A series of "How To" energy conservation booklets for the homeowner or tenant is available to the public.

2. Consumer Advisory Services

- A telephone inquiry service offers advice on energy products and services for "do-it-yourself" home energy improvements.
- Computerized information regarding energy products, services, and appliances is available, as well as a detailed information package on energy factors related to the purchase of homes.

3. New-Housing Services

- Technical support is provided for monitoring and developing energy-efficient building technologies and

The special features and construction methods that went into this R-2000 home in Smith Falls, Ontario, can save owners up to 75 per cent in energy costs over a conventional home.



practices and the associated training of the tradespeople who construct new homes.

Stressing the R-2000 energy-efficient new-home standard, this program provides for design competitions, provincial open houses with R-2000 builders, publications and other information for the public on R-2000 houses.

4. Training Services

- Training is available to such groups as heating contractors, building contractors, energy conservation product contractors, real estate agents, and retail sales staff of hardware stores and home building centres throughout Ontario.
- Training manuals, audio-visual materials, and other information are also available.

FURTHER INFORMATION

Consumer/Residential Energy
Advisory Program
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7
Phone (416) 965-0442
Long distance callers use toll-free
Zenith 80420

9 ALTERNATIVE FUELS DEMONSTRATION PROGRAM

GOVERNMENT
Publication



Fuels for transportation purposes account for 60 per cent of all oil consumption in the province. Recognizing that transportation is fundamental to Ontario's economy, the Ministry of Energy has established the Alternative Fuels Demonstration Program which emphasizes private sector involvement.

The Ministry acts as an intermediary, bringing together parties interested in developing new technologies or in finding innovative applications for known technologies. The Ministry also plays a central role in sharing and distributing information in order to ensure that opportunities to improve the efficiency of energy use or to make substitutions for gasoline and diesel are not overlooked. Seed money may be provided to encourage technology development by private sector interests.

In all alternative fuel development, the protection of public safety is of paramount importance. The Ministry works closely with the appropriate regulatory authorities and educational institutions to solve technical safety problems and create training programs in the safe use of alternative fuels.

The Technology Development component will remove technological barriers to the acceptance of alternative transportation fuels. The concentration will be on the development of neat methanol and natural gas technology for light and heavy engines, and on increasing the safe use of propane.

The Public and Institutional Fleets component will solicit commitments from the managers of large public and institutional fleets to improve their weighted

average fuel consumption ratings and increase their use of gaseous fuels. Working with private sector organizations, the Ministry will concentrate on the exchange of information and promotion of vehicle manufacturers' equipment where possible.

The Information Transfer component distributes technical information on the various means of improving energy efficiency in transportation and converting to alternative transportation fuels.

FURTHER INFORMATION

Alternative Fuels Demonstration
Program
Ministry of Energy
8th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-5303
Long distance callers use toll-free
Zenith 80420

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Agriculture makes a major contribution to Ontario's economy. Besides providing Ontario residents with high-quality, reasonably-priced food, our farmers export more than \$2-billion in products

every year – making agricultural products one of our largest exports.

In the 1980s, energy costs in agriculture have risen significantly. While total farm operating costs increased only one per cent between 1981 and 1985, the amount spent on energy rose by 20 per cent. Every dollar farmers saved from lower interest rates, for example, was eaten up by higher energy costs.

One way farmers can remain competitive and improve their profitability is to use energy more efficiently and thereby spend less on energy. Although there are many cost-effective technologies that make better use of energy in agriculture, farmers are being deterred from investing in them by a lack of detailed information, a heavy debt load, and low commodity prices.

PROGRAM SUMMARY

The Agricultural Energy Services Program, which will last for three years, encourages investment in proven, commercially-available technologies that will reduce energy costs in agriculture.

The Ministry of Energy is working with specialists in the Ministry of Agriculture and Food to provide a range of services. These agricultural energy experts work directly with individual farmers and are familiar with local farming conditions and practices.

The program is intended to overcome the lack of information about energy efficiency and technology and, in specific cases, the shortage of money for essential improvements. The program provides general technical advice on energy use, demonstrations of proven technologies that have not yet been widely adopted, and financial assistance for the purchase of selected energy-efficient equipment.

PROGRAM DESCRIPTION

1. Showcase Demonstrations

Demonstrations of commercially-available technologies that will increase energy efficiency will be set up and run on selected farms. There will be an emphasis on:

- Recovery of waste heat in livestock barns and greenhouses by means of heat pumps and heat exchangers.
- Storage systems for high-moisture grain that save energy by eliminating grain drying.
- Microprocessors to monitor and control energy use in various applications, including on-farm grain dryers and control of heat, light, and ventilation in livestock and poultry buildings.
- Expanded farm uses for existing tobacco kilns.
- Alternative fuels for heating farm buildings by means of biomass furnaces.

These grain silos in Blenheim, Ontario, use electronic controls to reduce energy consumption in grain drying, and to improve the drying process to produce better-quality grain for export.



2. Financial Assistance

a. Greenhouse Energy Efficiency Incentive Program

In greenhouses, particularly those built in times of low fuel prices, energy costs can constitute up to 40 per cent of operating costs. Energy-efficiency improvements can help to make the industry more competitive and to protect the more than 4,000 jobs provided by Ontario's greenhouses. Unfortunately, investment in such improvements has been discouraged by the high capital costs.

The Greenhouse Energy Efficiency Program is a five-year, \$5-million program that encourages the upgrading of existing greenhouses to make them more energy-efficient. Growers can apply for grants of up to one-third (to a maximum of \$34,000) of the capital and installation costs of approximately 20 proven energy-efficient technologies.

b. Grain Dryer Retrofit Assistance Program

With new technologies based on microprocessors, the amount of fuel used by commercial grain dryers can be reduced by 10 per cent or more and higher-quality dried grain can be produced.

Under the Grain Dryer Retrofit Assistance Program, operators can apply for grants to retrofit existing dryers with fully automatic control systems. Funding of one-third of capital and installation costs to a maximum of \$10,000 per control unit or \$30,000 per dryer is available.

3. Farm Advisory Services

Farm advisory services promote greater understanding of how to use energy more efficiently in agriculture through:

- Technical reports of energy projects on farms, fact sheets, general

publications concerning the use of energy on farms, and information on emerging technologies for drying grain and cooling and storing produce.

- A computerized study of energy use on selected farms, along with recommendations for improvements, under the "Farm Energy Audit" project.
- Regional training courses for contractors on installing and servicing heat pumps for agricultural use.
- A speakers' bureau that provides agricultural energy experts for farm meetings and for training sessions for Ministry of Agriculture and Food extension staff.

FURTHER INFORMATION

Agricultural Energy Services Program
Ministry of Energy
10th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-0840
Long distance callers use toll-free
Zenith 80420

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10 NORTHERN ONTARIO WOOD ENERGY PROGRAM

GOVERNMENT OF
ONTARIO
Publication



orthern Ontario now has a three-year, \$6-million program designed to promote the conversion of wood wastes to energy. This will increase Ontario's energy production from renewable sources, create

jobs and promote economic development in the North, and provide an environmentally sound alternative to conventional means of disposing of wood wastes.

Any commercial or industrial use of wood wastes to produce thermal or electrical power is eligible. Support in the form of grants or loans is available to companies wishing to establish wood energy plants. Assistance will not exceed 25 per cent of total capital costs and will be limited to the amount needed to raise the after-tax return on equity to approximately 20 per cent.

Any Canadian company, resident and doing business in Ontario, that possesses the necessary technical, financial, and managerial capabilities can take part in the program.

FURTHER INFORMATION

Northern Ontario Wood
Energy Program
Ontario Ministry of Energy
8th Floor
56 Wellesley Street West
Toronto, Ontario
M7A 2B7

Phone (416) 965-0443
Long distance callers use toll-free
Zenith 80420

The modern Chapleau cogeneration plant will eliminate the need for several teepee burners by burning 108,000 tonnes of wood waste per year and generating steam up to 7.5 MW of electricity.



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13 PUBLICATIONS AND FILMS

Government
Publications

PUBLICATIONS

Industry

- *Industrial Energy Services Program* (program information brochure)
- *Industry Energy Trends* (energy policy paper)

Agriculture

- *Agricultural Energy Services Program: Working Together for Energy Productivity on the Farm* (program information brochure)
- *Agricultural Energy Trends* (policy paper)

Education

- *Energy Alert* (an energy education magazine for teachers)
- *The Conserving Kingdom Cartoon Story Book*
- *Energy Starter Kit* (by Energy Educators of Ontario), Books 1 to 7
- *Curriculum Ideas* - Booklets Grades K-6
- *Energy in Society I* - Resource guide for teachers Grades 7-13
- *Energy in Society II* - Resource guide for teachers Grades 7-13

Consumer and Residential

- *The Low Energy New Home: The Right Home for You* (R-2000 information booklet)
- *There's No Place Like Home: A Guide to Making Your House More Energy Efficient* ("how-to" information book)
- *Super Energy Efficient Home Plans: R-2000* (information book)
- *R-2000 Homes: Keeping the Great Canadian Climate Outdoors* (information book)
- *R-2000...The Home for Today...and Tomorrow* (information book)
- *A Guide to Energy-Efficient Housing* ("how-to" information book)
- *Builders' Guide to Energy Efficiency in New Housing* (information book and brochure).

Municipal and Commercial

- *Save Energy and Reduce Operating Costs* (Municipal Oil Conversion and Energy Conservation Program, program information)
- *Municipal Draftproofing Projects* (infor-

mation brochure)

- *Energy Conservation in Small Municipalities* (information brochure)
- *Energy Conservation in New Buildings* (information brochure)
- *Energy Management of Arenas* (information brochure)
- *Energy Trends in Commercial and Institutional Buildings* (policy paper)

Government and Institutional

- *Banking on Efficiency: Government and Institutional Facilities* (information brochure)
- *Banking on Efficiency* (case studies)
 - *Energy Management, Kingston Psychiatric Hospital*
 - *Energy Efficient Greenhouses, Vineland*
 - *MTC Facilities, Thunder Bay*
 - *McMaster University Medical Centre*
 - *Energy Cascading, University of Ottawa*
 - *Co-generation, Orangeville Sewage Treatment Plant*
 - *Lighting*
 - *Energy Management, Monteith Correctional Centre*

Alternative Fuels

- *Moving Way Ahead* (information brochure)
- *Transportation Energy Trends* (energy policy paper)
- *Moving Way Ahead: Tomorrow's Fuels Today* (information on alternative fuels)

FILMS AND VIDEOS

- *Money to Burn?* (27 minutes)
- *Warming to Wood* (18 minutes)
- *Star Voyage* (3-1/2 minutes)
- *A Case for Warmth* (3 minutes)
- *The Energy Parable* (3 minutes)
- *Sunshine for Sale* (24 minutes)
- *Old House, New House* (27 minutes)
- *The Energy Auditor: Source and Resource* (12 minutes)
- *Energy Management: It's Good Business* (14 minutes)
- *Banking on Efficiency* (6 minutes)
- *The Conserving Kingdom* (29 minutes)

POLICY PAPERS

- *Energy Security for Canada:
Improving Energy Efficiency*
- *Trends in Ontario's Energy Use*
- *Parallel Generation in Ontario*
- *Fuelling Ontario's Future*
- *The Shape of Ontario's Energy
Demand*

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